



# Eastern Hemlock

*Tsuga canadensis*

Eastern Hemlock is a native tree from Eastern Canada that grows in association with other species such as birch, spruce, white pine, maple and beech. This tree usually reaches diameters of 45 to 60 cm and a height of up to 21 m, although larger trees are often seen. A native tree, it grows slowly and can live up to 600 years.

Its mechanical properties, including density, are superior to several other softwood species in Eastern Canada. Eastern Hemlock belongs to the Hem-Tam (N) group (Eastern Hemlock-Tamarack group) according to the National Lumber Grades Authority (NLGA).



# Eastern Hemlock

*Tsuga canadensis*

<b>Colour</b>	The heartwood is generally buff to light brown in colour and the sapwood slightly paler.
<b>Texture and qualities</b>	The grain ranges from wide to average and the wood is moderately light and hard. The wood tends to splinter and is cross grained.
<b>Applications</b>	Lumber: boards, coarse lumber, rough dimension stock and square timber. Parapets, construction posts and beams, platforms, light frames, construction mats, sub-floors, boxes, crates, general construction, and railway ties.

	Eastern Hemlock	Red Pine	Spruce, Pine, Fir Group (SPF)	Eastern White Pine	Scots Pine	Southern Yellow Pine	Douglas Fir
	<i>Tsuga canadensis</i>	<i>Pinus resinosa</i>	<i>Picea mariana, Pinus banksiana, Abies balsamea</i>	<i>Pinus strobus</i>	<i>Pinus sylvestris</i>	<i>Pinus alustris</i>	<i>Pseudotsuga menziesii</i>
<b>Density (kg/m<sup>3</sup>)</b>	<b>429</b>	<b>401</b>	<b>420</b>	<b>368</b>	<b>512</b>	<b>657</b>	<b>487</b>
<b>Modulus of rupture (kiln dried) MOR (MPa)</b>	<b>81</b>	<b>70</b>	<b>78</b>	<b>65</b>	<b>84</b>	<b>97</b>	<b>87</b>
<b>Modulus of elasticity MOE (MPa)</b>	<b>12 300</b>	<b>9 450</b>	<b>10 500</b>	<b>9 380</b>	<b>10 100</b>	<b>13 500</b>	<b>13 500</b>
<b>Hardness Janka (N)</b>	<b>2 740</b>	<b>2 120</b>	<b>2 430</b>	<b>1 650</b>	<b>2 420</b>	<b>3 900</b>	<b>2 990</b>
<b>Dimensional shrinkage</b>	<b>11 %</b>	<b>7 %</b>	<b>11 %</b>	<b>8 %</b>	<b>7 %</b>	<b>12 %</b>	<b>12 %</b>
<b>Planing</b>	★★	★★★	★★★★	★★★	★★★	★★★	★★★
<b>Stability</b>	★★★	★★★	★★★	★★★★	★★★	★★	★★★
<b>Gluing</b>	★★★	★★	★★★	★★★	★★★	★★★	★★★
<b>Mortisaint</b>	★★★	★★	★★★	★★	★★★	★★★	★★
<b>Turning</b>	★★	★★	★★★	★★★	★★	★★★	★★★
<b>Naibility</b>	★★★★	★★★★	★★★★	★★	★★★	★★★	★★★

Excellent: ★★★★★ Very good: ★★★★ Good: ★★★ Fair: ★

#### Sources

Canadian Standard Association (CSA), 086.  
 Jessome, A.P., *Strength and Related Properties of Woods Grown in Canada*, Forintek Canada Corp., 1995.  
 Tree Talk, *Woods of the World*, 1997.  
 The Wood Explorer, 2001-2002.

#### Pictures

Forêts, Faune et Parcs Québec  
 Duhamel Sawmill

Standard nominal (inches) and actual (mm) dimensions: thickness on width and lengths Lumber dimensions, before drying				
Product	(inches - ")	Length (feet - ')	(mm)	Length (m)
Boards and planks	1 x 3, 4, 5, 6, 8, 10" 2 x 3, 4, 6, 8, 10, 12"	8 to 16' * 8 to 16' *	22 x 73, 98, 124, 149, 200, 251 mm 44 x 73, 98, 149, 200, 251, 302 mm	2.44 to 4.88 m * 2.44 to 4.88 m *
Beams and poles	Min. 3 x 6" / Max. 12 x 12"	8 to 20' *	Min. 73 x 73 mm / Max. 302 x 302 mm	2.44 to 6.10 m *
Wall covering, standard profile, wide groove and round groove	1 x 5, 6, 8" 2 x 6, 8"	8 to 16' 8 to 16'	19 x 108, 133, 184 mm 38 x 133, 184 mm	2.44 to 4.88 m 2.44 to 4.88 m
Construction mats	Block 8 x 8, 10 x 10 and 12 x 12" Widths 40 et 48"	16 to 20'	Block 200 x 200, 251 x 251, 302 x 302 mm Widths 1016 and 1219 mm	4.88 to 6.10 m
Pallet stock	1", random widths	42, 50 ½, 62 ½, 85 ½"	22 mm, random widths	1.067 1.283, 1.575, 2.172 m

\* Longer, wider or thicker products available upon request



Quebec Wood  
Export Bureau

979, avenue de Bourgogne  
Bureau 540  
Québec (Québec)  
Canada G1W 2L4

☎ (418) 650-6385  
 ☎ (418) 650-9011

info@quebecwoodexport.com  
 www.quebecwoodexport.com



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